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Comparison of head nurses and practicing nurses in nurse competence assessment

Masoud Bahreini, PhD,[*] Marzieh Moattari, PhD,[**] Fazlolah Ahmadi, PhD,[***] Mohammad Hosein Kaveh, PhD,[****] Parichehr Hayatdavoudy, PhD,[*****] and Mostafa Mirzaei, PhD[******]

[*] Assistant Professor, Department of Nursing, Faculty of Nursing and Midwifery, Bushehr University of Medical Sciences, Bushehr, Iran.
[**] Associate Professor, Faculty of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran.
[***] Associate Professor, Department of Nursing, Faculty of Medicine, Tarbiat Modares University, Tehran, Iran.
[****] Assistant Professor, Faculty of Health, Shiraz University of Medical Sciences, Shiraz, Iran.
[*****] Candidate, Nursing Administration, Shahid Faghihi Hospital, Shiraz University of Medical Sciences, Shiraz, Iran.
[******] Assistant professor, Bushehr University of Medical Sciences, Bushehr, Iran.

Correspondence to: Marzieh Moattari, PhD. moattarm@sums.ac.ir This study has been registered in the deputy for research of Shiraz University of Medical Sciences with code number of 87-4149 and all expenditures has been paid by this deputy.

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Abstract

BACKGROUND:

Nurses play a crucial role in patient-care. Therefore, assessing nurses' clinical competence is essential to achieve qualified and safe care. The aim of this study was to determine and compare the competence assessments made by head nurses and practicing nurses in a university hospital in Iran in 2009.

METHODS:

A cross-sectional survey was conducted to make comparisons of both self-assessment of nurse competence as well as assessment made by their respective head nurses working in a university hospital setting in Iran. The instrument employed for data collection was Nurse Competence Scale (NCS), whose reliability and validity have been previously confirmed. The clinical competence of the nurses in 73 skills under 7 categories was determined based on a Visual Analogue Scale (VAS) (0 to 100). They were also asked to indicate the extent to which their competence was actually used in clinical practice on a four-point scale of Likert. The data was analyzed through descriptive and inferential statistics.

RESULTS:

Comparison of self-assessment (87.03 ± 10.03) and the assessment done by head nurses (80.15 ± 15.54) showed a significant difference but no precise differences were found between the assessment methods for the frequency of using these competencies.

CONCLUSIONS:

The results of this study indicated no consensus between the nurses owns assessment and their head nurse assessment. Therefore, it is necessary to use a combination of nurses' competence assessment methods in order to reach a more valid and precise conclusion.

KEY WORDS: Clinical competence, competence assessment, head nurse, nurse, self-assessment

Nursing competence is a professional issue and is central to patient care outcomes.[1] Present-day health services are highly complex and high quality care is mandatory. New and acute diseases are developing and hospitalization duration has decreased considerably. Awareness of the people has led to a simultaneous increase in their expectations from nurses. Obviously, these changes make more demands on practicing nurses to show their capabilities in caring of serious patients.[2] In order to face these challenges and ensure that the best care is given by nurses, it is necessary to assess the nurses' clinical competence.

Assessment of competence of practicing nurses has been identified as crucially important in maintaining professional standards[3], identifying areas of professional development and educational needs and ensuring that nurse competencies are put to the best possible use in patient care.[4]

Despite a large body of literature, there is still considerable debate about the nature of competence and its assessment. Watson et al. (2002) claimed that competence is a nebulous concept defined in different ways by different people.[5] Indeed, the general consensus among authors is that defining the concept of competence is an elusive task, and no agreed upon definition exists.[6,7] In view of the holistic definition of competence, it can be defined as a combination of knowledge, skills and individual capabilities to do professional practice efficiently.[8]

Disagreement in the definition of the 'competence' led to some difficulties such as the selection of the most effective competence assessment.[9] Various methods and instruments have been identified for assessment of competence in nursing. The most common are the methods based on

observation, supervisory assessment, ability and knowledge tests, peer reviews, portfolios and self-assessment. However, no comprehensive and effective measure has been established. Authors believe that among the different ways of nurses' competence assessment, self-assessment and assessment made by nurse managers have been used more successfully for assessing nurse competence.[10,11]

Self-assessment has been reported as the most common form of competence assessment. It is cost-effective, and assists nurses to maintain and improve their practice by identifying their strengths and areas that may need to be further developed.[4] Subjectivity, concerns with recording negative experiences and time constraints are precarious issues associated with self-assessment.[4,12] On the other hand, nurse managers undertake annual assessment of nurse competence to maintain high standards of care. This method of assessment has been identified as a valuable mechanism for providing feedback. It has also been proposed as an important component of clinical supervision.[13] Despite these benefits, this method can be a source of anxiety for both the managers and the nurses. In addition, there is a risk of biased assessment.[14]

Up to now, several international and local studies have been carried out regarding the assessment of nurses' competence. The studies of Hengstberger-sims et al. (2008) assessed the competence of new graduate nurses[15], Dannefer et al. (2005) used the peer assessment[16], and Gronroos and Perala (2008) and Bahreini et al. (2008) used self-assessment method for assessment of competence are examples of these studies.[17,18] Their limitation was that these studies used only one method for assessing nurses' competence. But, Meretoja et al. (2003) after comparing the results of self-assessment and the head nurse's assessment of nurses' clinical competence working in a university hospital in Finland showed that head nurses assessed nurses more competently than nurses themselves did.[19] Stalker et al. (1986) have also compared these two methods and the results of their research are contrary to those of Meretoja et al.; i.e., the nurses and head nurses believed that nurses had a high level of competence in clinical settings.[20] Salehi et al. (2001) compared the graduated nurses' performance by self-assessment and head nurse assessment in Iran and found that the mean evaluation scores of self-assessment in major categories of investigation are higher than those rated by head nurses.[21]

These studies have generally been carried out on nurse students or freshly graduated nurses; however, it is essential to do this kind of research on nurses with varied work experiences. In addition, in contradiction to the results of these studies, debates about the best way of nurses' competence assessment and consequential deficiency of related information along with the importance of assessing nurses' clinical competence make it necessary to develop more studies in this regard. Therefore, this study was designed and performed in a university hospital in Shiraz, Iran in order to determine and compare the two methods of competence assessment.

Methods

Design, sampling and data collection

This cross-sectional study was carried out in a university hospital in Shiraz, Iran. This hospital was selected because of the availability and the subsequent enthusiasm of its nursing managers. This hospital admits patients from southern Iran, and nurses who work in this hospital play a vital role in providing health care for people living in this area. A census sampling was used. The sample comprised of all nurses (n=330) and head nurses (n=19) working in this hospital, and all inpatient wards including medical, surgical, pediatrics, emergency, coronary care and intensive care units were investigated (19 wards). Criteria for selecting the samples included[1] graduation in the BSc nursing program[2] and working full-time in university hospital as a nurse.

In the beginning of the study, an explanatory session was held for the head nurses and nurses to introduce the whole plan, its objectives and its method. Then, prepared envelops each containing two similar competence questionnaires, one for the nurses and the other for the head nurses, along with an informed consent form and a manual of the instructions of filling the questionnaire were distributed among the head nurses. They had the responsibility of handing the envelops to the nurses of their respective wards. In the manual, the nurses were asked if they agreed to participate in the study, they filled the questionnaire independently and handed the head nurse the second questionnaire to be filled in. The participants were instructed to complete the questionnaire independently without consulting each other. The two questionnaires were completely identical in their content and structure. After completing the questionnaires, they were returned in closed envelopes separately to the nursing office. Data collection process lasted for one month. To maintain the privacy of the participants, all closed envelops were delivered to the main investigator.

Measurement

The instrument used in this research was Nurse Competence Scale (NCS) which assesses 73 skills in 7 different categories. These categories were as follows: helping role (7 skills), teaching – coaching (16 skills), diagnostic functions (7 skills), managing situations (8 skills), therapeutic interventions (10 skills), ensuring quality (6 skills) and work role (19 skills). This questionnaire has been designed by Meretoja et al. (2004) based on Benner's framework and its validity and reliability have been confirmed.[4,18]

In this study, each nurse was asked to identify the level of competence on a Visual Analogue Scale (VAS) (0-100) with values 0-25, 26-50, 51-75, and 76-100 that were respectively weak, moderate, good and excellent levels of competence. The mean individual scores in each item was the indicator of clinical competence in that item. The total mean of items in each category was the indicator of competence of nurses in that category and the total mean of categories was indicator of the total clinical competence of nurses. Therefore, in addition to identifying the level of nurse's clinical competence in each skill, the competence level in each seven category and finally, the overall nurse competence were identified. Moreover, every evaluator was asked to determine the level of performance of skills in the ward where the nurse was working at that time period. This was done by using Likert's four point scale in which 0 means not applicable; 1, rarely used; 2, occasionally used; and 3, frequently used. The logic behind this was based on the disparity of possessing the competence and its actual use in clinical practice. Demographic data such as age, gender, work experience in the current ward and total work experience were also collected through this questionnaire.

In order to yield a correct translation based on the recommended way of World Health Organization, the instrument used for assessing clinical competence of nurses was first translated into Persian language by a researcher and then, translated back into English. Finally, two English language specialists approved the accuracy of the translation. Then, validity of the instrument was approved by consulting specialists and experts of clinical nursing education and experienced nurses from different universities of the country. The reliability of the instrument was assessed by doing a pilot study and Cronbach's α coefficients in 7 categories ranged between 0.75 - 0.89, indicating the favorable internal consistency and high reliability of the instrument.[18]

Completed questionnaires were received from 205 staff nurses (response rate of 62%) and from all 19 head nurses (response rate of 100%).

Ethical consideration

The study was approved by the ethics committee of the university. Approval for data collection was obtained from the nursing administrators. All participants were given a letter containing information about the study's aims and procedures. Participants signed consent forms. The voluntary nature of participation and anonymity had been emphasized in the informed consent form.

Data analysis

Data analysis was done by the Statistical Package for Social Sciences version 11.5 (SPSS, Chicago, IL, USA). Frequency percentage, mean and standard deviation were used to describe the data. ANOVA was used for comparing the means and chi-square for comparing the frequency of using skills. Statistical significance was set at 0.05.

Results

Majority of the nurses were women (87.5%, n=166). Almost 24% (n=46) of nurses had less than 2 years work experience and all the nurses had a bachelor's degree. Two had a master's degree. The other demographic data of 19 head nurses and 190 practicing nurses are presented in Table 1.

The overall mean competence (87.03 ± 10.03) obtained in self-assessment was significantly greater than that calculated by head nurse assessment (80.15 ± 15.54) ($p < 0.05$). The difference between the results of these two types of assessment was also perfectly significant in seven categories of competence scale (ANOVA) (Table 2).

The nurses considered themselves more competent in the categories of “managing situations” and “teaching –coaching” while the head nurses considered them to be more competent in the categories of “diagnostic functions” and “managing situations”. The least level of competence in both types of assessment was identified in the category of “ensuring quality” (Table 2). The greatest level of difference between nurses and head nurses’ results was reflected in the categories of “managing situations” and “teaching–coaching” and the least level of difference was observed in the categories of “helping roles” and “diagnostic functions” (Table 2).

The level of using the skills in clinical practice in the current ward (occasionally or frequently) determined the minimum of 76 percent and maximum of 88 percent in self-assessment and 82 percent and 88 percent in the head nurse assessment, respectively, and there was no significant difference between the results in this regard (chi -square) (Figure 1).

Discussion

This study aimed to compare the results of nurse competence assessment by two methods of self-assessment and head nurse assessment. Although the overall competence level was recognized as favorable by both methods, the head nurses recognized the nurses as less competent than in self-assessment. In fact, the competence assessment showed that, regardless of the type of assessment, nurses' competence was judged as favorable. This finding was similar to the findings obtained by Safadi et al. (2010) concerning competence assessment of nursing graduates of Jordanian universities.[22] On the other hand, demographic data showed that practicing nurses were younger than the head nurses. The results of some studies declared that new and young nurses generally overestimate their clinical competence level that can explain the reason of difference between self-assessment of practicing nurses and that done by their head nurses. Meretoja and Leino-Kilpi (2003) and O'Connor et al. (2001) found that younger assessors have the tendency to assess nurse competence as higher than older assessors.[19,23]

This significant difference reflects a rather severe disagreement between the nurses and the head nurses in assessing the clinical competence. This has been previously reported in certain researches. In a research carried out in hospitals in Isfahan/Iran about the performance of freshly graduated nurses by themselves and their head nurses, the results indicated that there was a significant difference between the two assessment types.[21] Considering the results of that study, the nurses understood themselves as more competent than did their head nurses, so the results were congruent with the present research. A possible explanation for these differences could be related to higher expectations of the nurses from the managers.

In contrast, some researches have had different results; i.e., the head nurses have rated the nurses as more competent than the nurses themselves.[19] These dissimilarities make further investigations necessary to explore influential factors on assessment results. However, the present research indicated a significant difference between the two methods of assessment. It should be noticed that by point to point comparing of the results in categories of nurse competence, there was a relatively similar pattern of assessment, so the higher and the lower competence levels of nurses belonged to categories of "managing situations" and "ensuring quality", respectively. In studies carried out previously, some similarities can be seen such as studies of Bahraini et al. in Bushehr (2008), Meretoja et al. in Finland (2003) and Salonen et al. in Finland (2007).[18,19,24]

A similar pattern of assessment results obtained in comparing a university hospital in a developed country like Finland, a university hospital of Shiraz and a university hospital of Bushehr demonstrated that nurses have common weak and strong points regardless of the work environment. It is essential to pay adequate attention to these points to improve the strengths and eliminate weaknesses. These common points reflect the high capability of nurses in managing complicated clinical situations as a strong point and their low competence in ensuring quality skills like care

giving based on evidence and utilizing research findings in clinical practice as a weak point. It seems that the weak points should be noticed more than ever not only in Iran also in other parts of the world.

Despite significant differences between self-assessment of nurses' competence and head nurses' assessment, they had common viewpoints in terms of assessment of actual use of skills in clinical practice. This agreement was seen in the comparison of the frequency of using the skills in seven categories and in overall frequency of using the skills. Perhaps, the high level of agreement of assessment results in terms of performance is because of the visible nature of performance that can lead to a decrease on the subjectivity. Meanwhile, the lack of precise definition of competence can lead to assessment diversity. In fact, the lack of a clear definition of competence has been implied in many studies.[25]

There have been some limitations in performing this research. Anyway, the entity of evaluation is such that it can be affected by individual evaluator characteristics. Furthermore, the behavior of nurses can be changed because of knowing that they will be assessed by their managers. It must be remembered that no direct observation has been done to assess the nurse performance in order to remove any direct effect on the nurses' behavior. Despite reasonable number of samples, since the sample had been chosen from a university hospital in Shiraz, the cultural and environmental factors of research area can be influential, so this is noteworthy in generalizing the results.

Conclusion

The results of this study indicated that although head nurses agreed with nurses about the frequency of using the skills, there was profound disagreement between these two groups in assessing the level of nurses' competence. In fact, comparison of the results in different categories indicated that the nurses considered themselves more competent than what head nurses reported. These results highlighted the importance of accurate assessment of the competence. This study also indicated that for assessment of competence more than one method should be used. Assessment made by head nurses led nurses to recognize categories that need to be improved and by self–assessment, the nurses could achieve self-awareness in terms of their weak and strong points. Therefore, a multi-method approach to the assessment of nurse competence is advisable.

Since this study has focused on the importance of nurse clinical competence assessment and enhancement of its precision by utilizing different resources, more research is needed to assess competencies in different environments and to compare the perceptions of nurse managers, nurses and peers . Moreover, the nurses and head nurses' points of view about clinical competence assessment and methods of assessment are to be investigated by qualitative and mixed studies.

The authors declare no conflict of interest in this study.

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Figures and Tables

Table 1

Variable		Min	Max	Mean	SD
Age (year)	Head nurse	35	52	45.26	5.20
	Practicing nurses	22	52	31.80	7.32
Overall work experience (year)	Head nurses	10	29	19.89	5.98
	Practicing nurses	0.1	28	8.11	7.02
Current ward work experience (year)	Head nurses	1	28	10.15	8.40
	Practicing nurses	0.1	25	4.08	4.54

Demographic characteristics of head nurses (n=19) and practicing nurses (n=190)

Table 2

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Mean of nurse competence					
Category	Head nurse assessment	Self-assessment	difference	Significance	df
Helping role	81.58 ± 14.36	85.27± 11.96	3.69	0.009	355
Teaching-Coaching	79.16 ± 16.59	87.11± 11.27	7.95	0.000	345
Diagnostic function	82.56 ± 15.34	86.38 ± 13.01	3.82	0.012	354
Managing situations	81.69 ± 16.24	89.86 ± 10.32	8.17	0.000	345
Therapeutic inter-ventions	78.53 ± 16.97	86.26 ± 12.94	7.73	0.000	346
Ensuring quality	77.38 ± 18.21	83.95 ± 14.27	6.57	0.000	348
Work role	81.06 ± 15.76	86.96 ± 11.12	5.9	0.000	323
Overall competence	80.15 ± 15.54	87.03 ± 10.03	6.08	0.000	308

Comparison of self-assessment and assessment made by head nurses of level of clinical competence (ANOVA)

Figure 1

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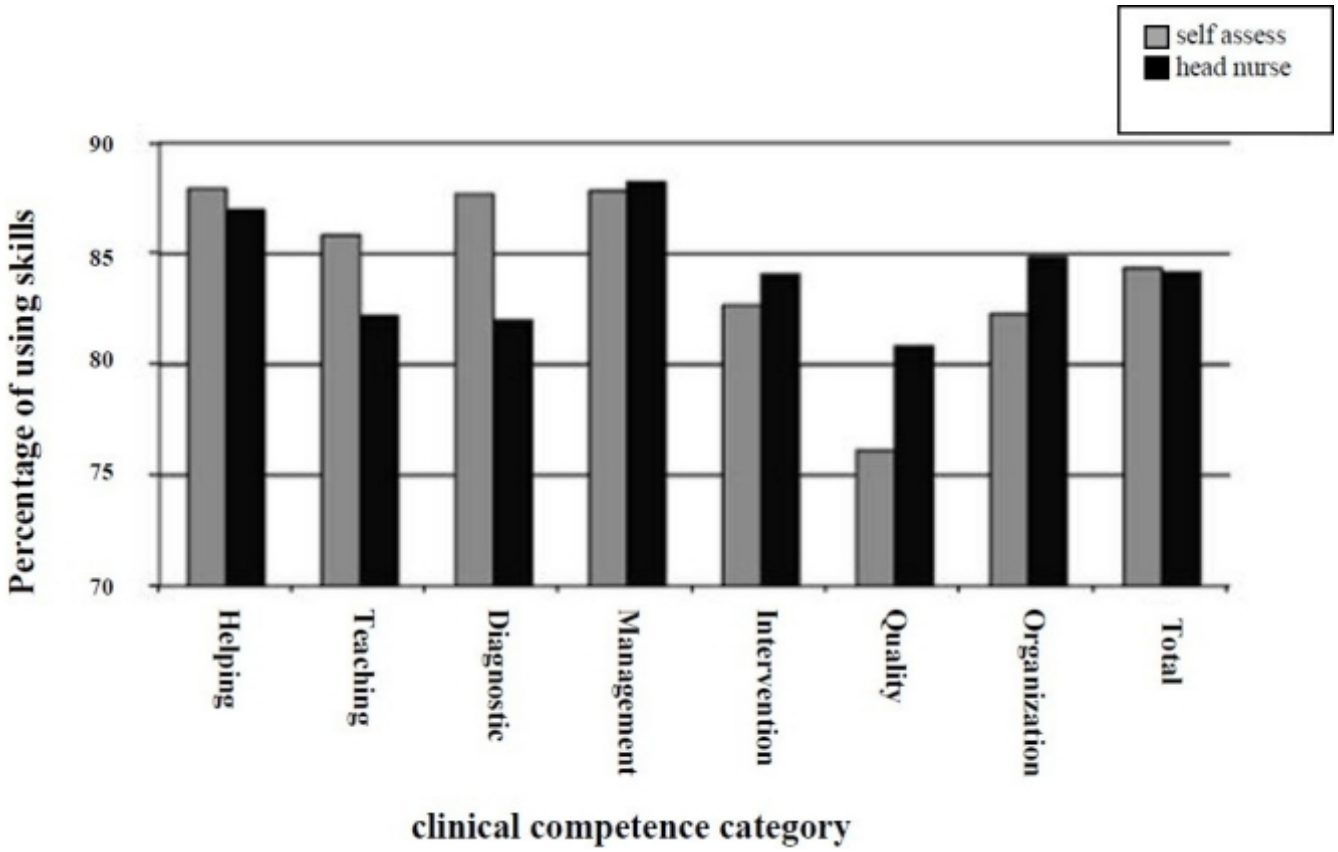

The difference of self-assessment and head nurse assessment of using skills in different categories of clinical competence